**Supplementary Table S1 :** Mass transitions and conditions for negative electrospray ionization HPLC-MS/MS analysis of phytoprostane- $F_1$  and of the hydroxy fatty acids issued from the oxidation of linoleic (18:2) and linolenic (18:3) acids.

Lipids were analysed with a Waters Micromass Quatro Premier triple quatrupole mass spectrometer (Milford, MA, USA) in the negative ESI mode with a capillary voltage of 3 kV. The source was set at 120°C and N<sub>2</sub> was used as desolvation gas with a flow of 800L/h at 350°C. Argon was used for collision-induced dissociation (flow rate of 0.3 mL/min, 3 x 10<sup>-3</sup> mBar) The cone voltage and collision energy were optimized for all compounds and selected mass transitions were monitored. For HFA analyses, response factors were determined by injection of a mixture of HFA, obtained by methylene blue catalysed photo-oxidation of free 18:3 (18:2), with a composition determined both by HPLC-UV and full scan HPLC-MS. See Supplementary Figure 1 and text footnotes for abbreviations; PPF<sub>1</sub>, phytoprostane-F<sub>1</sub> (22).

Compound	Precursor ion	Product ion	Cone voltage	Collision energy
	( <i>m/z</i> )	( <i>m/z</i> )	(V)	(eV)
PPF <sub>1</sub> -I	327	225	41	26
PPF <sub>1</sub> -II	327	171	41	26
<sup>18</sup> O <sub>3</sub> -PPF <sub>1</sub> -I	333	227	41	26
<sup>18</sup> O <sub>3</sub> -PPF <sub>1</sub> -II	333	173	41	26
9-HODE	295	123	26	20
9-HODE	295	171	26	20
10-HODE	295	155	26	20
10/12-HODE	295	183	26	20
12-HODE	295	211	26	20
13-HODE	295	195	26	20
13-HODE	295	225	26	20
<sup>18</sup> O <sub>2</sub> -13-HODE	299	199	26	20
<sup>18</sup> O <sub>2</sub> -13-HODE	299	229	26	20
9-HOTE	293	121	26	20
9-HOTE	293	171	26	20
10-HOTE	293	155	26	20
10/12-HOTE	293	183	26	20
12-HOTE	293	211	26	20
13-HOTE	293	195	26	20
13/15-HOTE	293	223	26	20
16-HOTE	293	235	26	20
<sup>18</sup> O <sub>2</sub> -13-HOTE	297	223	26	20
<sup>18</sup> O <sub>2</sub> -13-HOTE	297	227	26	20
15-HEDE	323	113	26	20
15-HEDE	323	223	26	20